

Remarks

The above Amendments and these Remarks are in reply to the outstanding Office action. Claims 1-3, 5, 7-13, 17-40, 42, 44-54 and 58-61 are presently pending. Claims 1-3, 5, 7-12, 17, 23-25, 30, 34-40, 42, 44, 54 and 58-61 have been amended.

Claims 3, 11-12, 17, 19-33 and 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-12, 34 and 35 are objected to because of containing informalities. The informalities have been corrected and it is therefore respectfully requested that the objection to the claims be withdrawn.

Claims 1-2, 5, 7-10 and 18 are rejected under 35 U.S.C. §102(e) as being anticipated by *Dowling* (U.S. Publication No. 2005/0170825 A1).

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Dowling* in view of *Pham et al.* (U.S. Patent No. 6,891,820 B1).

Claims 34-37, 54, 58, 60 and 61 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Dowling* in view of *Mizutani et al.* (U.S. Publication No. 2001/0022780 A1).

Claims 38-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Dowling* and *Mizutani et al.* further in view of *Yang et al.* (U.S. Publication No. 2003/0027570 A1).

I. Objection to Claims 11-12, 34 and 35 based on Informalities

Claims 11-12, 34 and 35 have been amended as suggested by the Examiner. It is therefore respectfully requested the Examiner withdraw the objections to claims 11-12, 34 and 35 based informalities.

II. Rejection of Claims 1-2, 5, 7-10 and 18 Under 35 U.S.C. §102(e)

Claims 1-2, 5, 7-10 and 18 are rejected under 35 U.S.C. §102(e) as being anticipated by *Dowling* (U.S. Publication No. 2005/0170825 A1).

Embodiments of the claims are directed toward a hand-held device for enabling communication between one or more cellular networks, such as a wide area network (WAN) and the wireless local area network, such as a LAN. Claim 1 calls for “a storage device to store a router software component to transfer a plurality of data packets between ...cellular networks and...the wireless local area network...” (Emphasis added) Claim 1 also calls for “an interface software component to add a first network service software component that provides one or more network services to the wireless local area network...”

In embodiments of the claims, the router software component translates an IP address within the

plurality of public IP addresses to a corresponding IP address within the plurality of private IP addresses, and vice versa. Various terminals (such as a desktop computer, a laptop computer, a personal digital assistant, a headset, a pager, etc.) are connected to the hand-held device forming the wireless LAN network and communicate with said hand-held device by means of short-range radio signals. The hand-held device is also connected to the WAN network, while communicating over said network by cellular signals. The hand-held device comprises a transceiver having a wide area network address for communicating with one or more processing devices over the wide area network, and a transceiver (such as the Bluetooth™ transceiver) for communicating with one or more processing devices over the wireless local area network. The router software component (that is stored in the storage device within the hand-held device) is responsible for transferring IP packets between the wireless LAN and WAN. Also, the router software component is responsible for the IP packet queuing/dropping, and it comprises a queuing software component, Quality of Service software component or equivalent for queuing IP packets. Further, an IP packet dropping software component is used for reducing congestion caused by having more than one terminal connected simultaneously. The router software component further comprises an interface for adding a first network service software component for providing network services over the wireless LAN. The first network service software component is loaded into the storage device of the hand-held device from a processing device connected to the WAN, or it is loaded into said storage device during the manufacturing process of said hand-held device.

Dowling discloses a system for enabling a mobile unit to access a federation of associated wireless access points using initially unknown and variable air interface protocols. Federated wireless access services are provided with the assistance of associates. The federated access services are controlled by a network server and are made available to the users of a wide area wireless access system. A plurality of associates is enrolled using an on-line registration system. Each associate indicates an air interface protocol used by a local wireless access point supplied by the associate. A signal is received from a wireless client. This signal identifies proximity of the wireless client and helps the server choosing one of the wireless access points to supply access to the client. Then, the server sends to the wireless client an indication of a second air interface protocol and a set of parameters for use in accessing a second wireless network access point using the second air interface. The second wireless network access point is supplied by one of the associates. The server next sends to the second wireless network access point an indication of the remote client and a code requesting the second wireless network access point to provide wireless access to the remote client. This method allows a wireless user to switch, for example from a CDMA macrocellular network, to a local area network operated by an associate.

However, Dowling does not disclose “a storage device to store a router software component to transfer a plurality of data packets between ...cellular networks and...the wireless local area network...”.

Further, *Dowling* does not disclose “an interface software component to add a first network service software component that provides one or more network services to the wireless local area network...”

It is therefore respectfully requested the Examiner withdraw the rejection of claims 1-2, 5, 7-10 and 18 under 35 U.S.C. §102(e).

III. Rejection of Claim 13 Under 35 U.S.C. §103(a)

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Dowling* in view of *Pham et al.* (U.S. Patent No. 6,891,820 B1).

Claim 13, which depends from claim 1, is patentable for at least the reasons stated above in regard to claim 1-2, 5, 7-10 and 18.

Pham et al does not disclose “a storage device to store a router software component to transfer a plurality of data packets between ...cellular networks and...the wireless local area network...”. Further, *Dowling* does not disclose “an interface software component to add a first network service software component that provides one or more network services to the wireless local area network...”

Further, *Pham et al.* relates to a data communication system capable of forwarding IP-addressed data to devices as such devices move among networks having different IP addresses. *Pham et al.* discloses first and second networks containing first and second pluralities of nodes. At least one of the first plurality of nodes is adapted to receive data transmissions from an external IP-based network. Upon joining the first network, the device is assigned with an IP address, which remains with it irrespective of whether it moves beyond the range of the first network. When this device roams into the vicinity of the second network, data addressed to the device, which is received at the first network, is forwarded via at least one node of the second network to the roaming device.

It is therefore respectfully requested the Examiner withdraw the rejection of claim 13 under 35 U.S.C. §103(a).

IV. Rejection of Claims 34-37, 54, 58, 60 and 61 Under 35 U.S.C. §103(a)

Claims 34-37, 54, 58, 60 and 61 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Dowling* in view of *Mizutani et al.* (U.S. Publication No. 2001/0022780 A1).

Claims 34-37, 54, 58, 60 and 61 are patentable for at least the reasons stated above in regard to claim 1-2, 5, 7-10 and 18.

Mizutani et al. does not disclose “a storage device to store a router software component to transfer a plurality of data packets between ...cellular networks and...the wireless local area network...”. Further,

Dowling does not disclose “an interface software component to add a first network service software component that provides one or more network services to the wireless local area network...”

Further, *Mizutani et al.* discloses a communication method for performing a group communication among a plurality of communication terminals, the method comprising the steps of: setting a valid time period on each of communication terminals performing the group communication, wherein the valid time period is longer than a time for back-and-forth transfer between adjoining communication terminals, and is shorter than an expected time for the communication terminals to go out of communication range; and communicating among a group of remaining communication terminals except a communication terminal that exceeds the set valid time period. The group communication is performed in a wireless ad-hoc network that has a rearrangement frequency of connection higher than a communication frequency due to the movement of communication terminals.

Mizutani et al. discloses a communication method for performing a group communication among a plurality of communication terminals, the method comprising the steps of: setting a valid time period on each of communication terminals performing the group communication, wherein the valid time period is longer than a time for back-and-forth transfer between adjoining communication terminals, and is shorter than an expected time for the communication terminals to go out of communication range; and communicating among a group of remaining communication terminals except a communication terminal that exceeds the set valid time period. The group communication is performed in a wireless ad-hoc network that has a rearrangement frequency of connection higher than a communication frequency due to the movement of communication terminals.

It is therefore respectfully requested the Examiner withdraw the rejection of claims 34-37, 54, 58, 60 and 61 under 35 U.S.C. §103(a).

V. Rejection of Claims 38-40 Under 35 U.S.C. §103(a)

Claims 38-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Dowling* and *Mizutani et al.* further in view of *Yang et al.* (U.S. Publication No. 2003/0027570 A1).

Claims 38-40 are patentable for at least the reasons stated above in regard to claims 1-2, 5, 7-10 and 18.

Yang et al. does not disclose “a storage device to store a router software component to transfer a plurality of data packets between ...cellular networks and...the wireless local area network...”. Further, *Dowling* does not disclose “an interface software component to add a first network service software component that provides one or more network services to the wireless local area network...”

Yang et al. discloses a communication system that routes calls between a calling phone and a roaming mobile unit without wasting bandwidth while increasing the quality of service and overall system

performance. The serving (Mobile Switching Center) MSC of a roaming mobile unit performs backward signaling with the switch or MSC that the calling party is connected to. The serving MSC thereby selects a voice channel for the call that is different from the original voice channel established during the start of the call. Parts of the original communication path are then released, thereby enabling them to be used by other entities in the communication system. In this manner, a call path used to send voice and/or data between a calling party and a roaming mobile unit can be significantly shorter than the original path used to locate and page the roaming mobile unit.

It is therefore respectfully requested the Examiner withdraw the rejection of claims 38-40 under 35 U.S.C. §103(a).

VI. Conclusion

Based on the above amendments and these remarks, reconsideration of claims 1-3, 5, 7-13, 17-40, 42, 44-54 and 58-61 is respectfully requested.

Should further questions remain, the Examiner is invited to contact the undersigned attorney by telephone.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 501826 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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